KANSAS DEPARTMENT OF AGRICULTURE

Noxious and Invasive Weed Update

Plant Protection and Weed Control

Spring 2011

Special points of interest:

- Kansas Noxious Weed News
- Herbicide Headlines
- Quarantined Plant Corner
- Invasive Species Spotlight

Inside this issue:

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Kansas Noxious Weed News

Getting to the "Root" of the Problem about Noxious Weeds

Most of Kansas' noxious weeds have a perennial life cycle. This aspect allows these plants to return year after year, often from an underground root system. Moreover, the root systems of many noxious weeds allow the plants to reproduce vegetatively, rather than only forming seeds.

Vegetative reproduction offers these plants a valuable survival mechanism. If the above ground portions of a plant are removed by herbivores or chemical herbicides, the plant can resprout from it's roots and survive. This trait is great for the plant, but very problematic for anyone trying to manage one of these noxious weeds.

For example, studies have shown that the root system of a single hoary cress (*Cardaria draba*) plant under favorable conditions can penetrate the soil to depths of 30' and spread horizontally over 11', in a single year. The rapid growth of these types of weeds makes proper management a necessity. It should be stressed however that no **single** treatment provides effective, long-term control of perennial noxious weeds. Systemic herbicides that kill the roots of the plant are effective in gaining initial control of new or severe infestations. Nevertheless, the development of a long-term, integrated management plan that includes differing control strategies, establishment of desirable species, careful land use management, and prevention of new infestations will ultimately be more successful.

— D. Banks

Herbicide Headlines

Updates to the Proposed NPDES Pesticide General Permit

On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted EPA's request for an extension of the deadline for when permits will be required for pesticide discharges into U.S. waters from **April 9, 2011 to October 31, 2011**. The extension allows sufficient time for EPA to engage in Endangered Species Act consultation and complete the development of an electronic database to manage requests for coverage under the Agency's general permit. It also allows time for authorized states to finish developing their state permits and to provide additional outreach to stakeholders on pesticide permit requirements.

Additionally, on March 31, 2011, in the U.S. Congress the House of Representatives passed H.R. 872, the Reducing Regulatory Burdens Act of 2011. H.R. 872 would amend the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to clarify that the Administrator of the Environmental Protection Agency (EPA) or a state may not require a permit under the Federal Water Pollution Control Act for the application of pesticides regulated under FIFRA.

If H.R. 872 or a similar bill exempting NPDES permitting for FIFRA regulated pesticides becomes law, the Kansas NPDES Pesticide General Permit being proposed by The Kansas Department of Health and Environment (KDHE) would not be required by pesticide operators.

— D. Banks

Quarantined Plant Corner

Quarantined Ornamental Plant Cultivars in Kansas

'Rubra' Tamarisk (*Tamarix ramosissima* 'Rubra'). Photo: Steve Dewey, Utah State University, Bugwood.org

Every gardener, whether professional or amateur, loves to obtain and grow different cultivated varieties (cultivars) of flowers, shrubs, and grasses. The development of new and exciting cultivars is what fuels many plant breeders. However, did you know that some ornamental plant cultivars are illegal in Kansas? The Plant Pest and Commodities Act of Kansas grants the Secretary of Agriculture the authority to quarantine plant pests. A quarantined plant is prohibited from being sold, bartered, or moved within the state. Kansas currently has four active, permanent quarantines that impact potential cultivars in the state, these include tamarisk (salt cedar), purple loosestrife, Grecian foxglove, and all federal noxious weeds such as Japanese bloodgrass (*Imperata cylindrica*), giant salvinia (*Salvinia auriculata*, *S. biloba*, *S. herzogii*), and nonnative climbing ferns (*Lygodium flexuosum*, *L. microphyllum*).

Included is a listing of potential cultivars impacted by the state's plant pest quarantines.

Tamarisk Cultivars (includes **all** *Tamarix* species)

'Cheyenne Red'
'Pink Cascade'
'Plumosa'
'Rubra'
'Summer Glow'

Purple Loosestrife Cultivars (includes *Lythrum salicaria*, *Lythrum virgatum*, and **all** hybrids derived from these species)

'Atropurpureum'
'Augenweide'
'Blush'
'Brightness'
'Cinereum'
'Columbia Pink'
'Dropmore Purple'
'Feuerkerze'
'Firecandle'
'Florarose'
'Happy'
'Hirsutum'
'Lady Sackville'
'Little Robert'
'Morden Gleam'
'Morden Pink'
'Morden Rose'
'Prichard's Variety'
'Rakete'
'Red Gem'
'Robert'
'Robin'
'Rosa Spitzentraum'
'Rose'
'Rose Queen'
'Rosencaule'
'Roseum'
'Rosy Gem'
'Stichflamme'
'Svea'
'Swirl'
'The Beacon'
'The Bride'
'The Rocket'
'Zigeunerblut'

'Blush' Purple Loosestrife (*Lythrum salicaria* 'Blush'). Photo: Norman E. Rees, USDA Agricultural Research Service - Retired, Bugwood.org

Grecian Foxglove Cultivars (*Digitalis lanata*)

'Cafe Creme'
'Genova'
'Spice Island'

Japanese Bloodgrass Cultivars (*Imperata cylindrica*)

'Red Baron'
'Rubra'

Grecian Foxglove (*Digitalis lanata*). Photo: Jeff Vogel, Kansas Department of Agriculture

If you observe any of these cultivars, either for sale or trade, please contact us at (785) 862-2180. More information on quarantined plants can be found at:

http://www.ksda.gov/plant_protection/content/360

— D. Banks

'Red Baron' Japanese Bloodgrass (*Imperata cylindrica* 'Red Baron'). Photo: Charles T. Bryson, USDA Agricultural Research Service, Bugwood.org

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Plant Protection and Weed Control staff work to ensure the health of the state's native and cultivated plants by excluding or controlling destructive pests, diseases and weeds. Staff examine and analyze pest conditions in crop fields, rangelands, greenhouses and nurseries. Action taken to control potential infestations of new pests, whether they are insects, plants diseases or weeds, is beneficial to the economy and the environment.

Our mission is to:

- Exclude or control harmful insects, plant diseases, and weeds;
- Ensure Kansas plants and plant products entering commerce are free from quarantined pests;
- Provide customers with inspection and certification services.

Invasive Species Spotlight

Kochia or Mexican Fireweed

Kochia (*Kochia scoparia* (L.) Schrad.), also called Mexican fireweed, mock cypress, Summercypress, or fire bush, is a member of the goosefoot family (Chenopodiaceae) native to southern and eastern Russia. Kochia is widely distributed throughout North America and Europe and has be found in every Kansas county.

Kochia is an erect, much-branched, annual plant that can grow up to 7 feet tall with a pyramidal or oval outline. The leaves of kochia seedlings are quite hairy but quickly develop into alternate, linear to lanceolate stem leaves, 0.8 to 4 inches long and 0.02 to 0.48 inch wide which are hairy below and glabrous above. The roots of kochia plants generally grow to soil depths of 6 to 8 feet, but can penetrate as much as 16 feet with 22 feet of lateral spreading. The small, non-descript, green flowers lack petals and are found in clusters among the axils of the upper leaves and at the tips of branches. Kochia produces a flattened, globular, fruit with a star shaped hull enclosing a single, brown, oval, flattened seed. A single plant typically produces over 14,000 seeds per year. However, some plants, under favorable conditions, can produce as many as 50,000 seeds per year. Seeds are dispersed by dead plants breaking off at the base and blowing in the wind as tumbleweeds.

Kochia is of serious concern as an agricultural weed as populations resistant to atrazine, ALS-inhibitor, and glyphosate herbicides have been discovered. Plants have a wide tolerance for soil, moisture, and salinity extremes and are found in numerous habitat types including grasslands, prairies, wastelands, roadsides, floodplains, ditches, and cultivated fields.

For more information on kochia please contact KDA at (785) 862-2180.

— D. Banks

Kochia stem with flowers. Photo: John M. Randall, The Nature Conservancy, Bugwood.org

Kochia fruits and seeds. Photo: Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org